

**REMARKS**

Reconsideration and allowance of the subject application are respectfully requested.

Upon entry of this Amendment, claims 1-25 are pending in the application. In response to the Office Action (No. 13), Applicant respectfully submits that the pending claims define patentable subject matter. By this Amendment, Applicant has amended independent claim 1 to improve clarity (i.e., provide an antecedent basis for the term “universal application program”).

**I. Formalities**

**The Examiner is again requested to *acknowledge* receipt of the priority documents or the claim for foreign priority under 35 U.S.C. § 119 in the next action.**

**The Examiner is again requested to indicate acceptance of the drawings in the next action.**

**II. Prior Art Rejections**

Claims 1, 8, 9, 11, 12 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Admitted Prior Art in view of Domenikos et al. (U.S. Patent No. 5,838,910; hereafter “Domenikos”) and newly cited “The Workflow Application Architecture” (FutureScope, February

2000, hereinafter “the FutureScope article”).<sup>1</sup> Claims 2, 3 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Admitted Prior Art in view of Domenikos, “The Workflow Application Architecture” and Jigour et al. (U.S. Patent No. 5,81,426; hereafter “Jigour”). Claims 4-7, 10 and 14-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Admitted Prior Art in view of Domenikos, “The Workflow Application Architecture”, Jigour and Intel: Understanding the Flash Translation (FTL) Specification (December 1998, hereafter “the Intel article”).

**A. Claims 1-7**

Independent claim 1 is directed to “[a] portable slave device which is connected through a predetermined coupling device to a host device comprising a file system and an application program.” Claim 1 recites that the slave device comprises:

a media driver for performing connection to the file system of the host device via the predetermined coupling device according to a predetermined protocol; and

a storage device which is connected to the file system of the host device via the media driver, wherein at least a portion of the storage device operates as a

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<sup>1</sup> Applicant notes that Korean Application 99-23122 (from which the present application claims priority) was filed June 19, 1999 while the FutureScope article has a publication date of February 2000. Therefore, the FutureScope article may be removed as prior art with regard to the present application by filing a verified translation of Korean Application 99-23122 in order to perfect the priority claim of the present application under 37 C.F.R. § 1.55(a). However, since the FutureScope article does not make up for the deficiencies of the other cited references, as explained below, Applicant is traversing the §103 rejection on the merits rather than submitting a verified translation of the priority document.

storage device of the host device when the universal application program is used by the host device.

With regard to independent claim 1, the Examiner contends that the Admitted Prior Art discloses all of the features of the claimed slave device except for a media driver, a predetermined protocol and “a client as a master and a server as a slave”. However, the Examiner asserts that Domenikos teaches the claimed media driver via “the device driver 26”, “the file hierarchy (col 14, ln 39-46)”, “disk partition (col 4, ln 4-45)”, “a file directory (col 4, ln 24-45)”, and “transport protocol layer (col 9, ln 48-60)”. The Examiner further asserts that the FutureScope article discloses “a client as a master and a server as a slave”.

Applicant respectfully submits that the claimed invention would not have been rendered obvious in view of the cited references.

As discussed on pages 1-2 of the present application, the slave device depicted in Figures 1A and 1B (Applicant’s admitted prior art) is a peripheral device such as a portable data terminal, zip drive, MP3 player or digital camera, and the host device is a computer device such as a personal computer, wherein slave device and the host device are connected by a physical coupling device. The slave device includes a storage device, and the host device includes a file system and/or application programs. Application programs within the host device can use the storage device in the same manner of using a storage device within the host device through the file system of the host device. Further, the host device uses the application programs to perform connection to the slave device. For example, in the case of a digital camera (slave device) connected to a personal computer (host device) by a serial type of coupling device, image data

stored in a storage device of the digital camera can be read by the personal computer using an application program corresponding to the digital camera.

Domenikos discloses a system wherein a remote client computer/workstation (host device) executes an application program stored in an Internet server (slave device) without downloading the application program to the client computer. As shown Figure 2 of Domenikos, the device driver 26 (which the Examiner contends corresponds to the claimed media driver) is part of the client computer 12 which is a host (master) device rather than a slave device, as required by claim 1.<sup>2</sup>

Thus, Applicant respectfully submits that one of ordinary skill in the art would not have been motivated to modify the slave device of admitted prior art Figure 1B to include the device driver of the client computer (host device) in Domenikos because Domenikos does not teach or suggest that the device driver is part of a slave device.<sup>3</sup>

Further, “the file hierarchy”, “disk partition”, “a file directory”, and/or “transport protocol layer” of Domenikos, which the Examiner also cites in support of the rejection, are not related to the claimed media driver but rather are components of an administration program 44 of the Internet server 40 (slave device) for storing a file system of computer files on the memory devices 14a, 14b and 46 according to a select file system protocol. Moreover, Domenikos’ administration program

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<sup>2</sup> Although the Examiner now states that “APA and Domenikos do not teach a client as a master and a server as slave”, Domenikos does teach the client (computer) is a master and the (Internet) server is a slave.

<sup>3</sup> To establish a *prima facie* case of obviousness under 35 U.S.C. § 103, there must be some suggestion or motivation to modify and/or combine the reference teachings.

does not perform connection to a file system of a host device (i.e., client computer 12). Lastly, as discussed above, the purpose and operation of the slave device of admitted prior Figure 1B is very different from that of Domenikos' Internet server which stores and executes application code such that one of ordinary skill in the art would not have been motivated to modify the slave device of Figure 1B to include the administration program of the Internet server of Domenikos.

Similar to Domenikos, the FutureScope article discloses a client as a master and a server as slave (as the Examiner correctly notes in the Office Action). Thus, the FutureScope article does not make up for the deficiencies of Domenikos by providing any motivation to modify the slave device of Applicant's Admitted Prior Art to include "a media driver for performing connection to the file system of the host device via the predetermined coupling device according to a predetermined protocol."

Accordingly, Applicant respectfully submits that independent claim 1, as well as dependent claims 2-7, should be allowable because the cited references do not teach or suggest all of the features of the claims and one of ordinary skill in the art would not have been motivated to combine and modify the cited references to produce the claimed invention.

#### **B. Claims 8-15**

Independent claim 8 is directed to "[a] host device connected to a portable slave device comprising a storage device through a predetermined coupling device." Claim 8 requires that the host device comprises "a file system for performing connection to a top layer of the slave device

according to a predetermined protocol so that at least a portion of the storage device of the slave device operates as a storage device of the host device.”

With regard to claim 8, the Examiner maintains that the Admitted Prior Art discloses all of the features of the claimed host device except for performing connection to a top layer of the slave device according to a predetermined protocol, which the Examiner asserts is disclosed by Domenikos.<sup>4</sup> Similar to claim 1, the Examiner asserts that Domenikos teaches the features of claim 8 which are missing from the Admitted Prior Art via “the device driver 26”, “the file hierarchy (col 14, ln 39-46)”, “disk partition (col 4, ln 4-45)”, “a file directory (col 4, ln 24-45)”, and “transport protocol layer (col 9, ln 48-60)”.

Although the device driver 26 is a component of a host device (i.e., client computer 12), the device driver 26 is not “a file system for performing connection to a top layer of the slave device”, as required by claim 8. Further, as discussed above, “the file hierarchy”, “disk partition”, “a file directory”, and/or “transport protocol layer” of Domenikos, which the Examiner also cites in support of the rejection, are components of the administration program 44 of the Internet server 40 which is a slave device rather than a host device. Lastly, the purpose and operation of the host device shown in admitted prior Figures 1A and 1B (i.e., a personal computer) is very different from that of Domenikos’ Internet server which stores and executes application code such that one

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<sup>4</sup> Although the Examiner cites the FutureScope article in the statement of the rejection of claim 8 on page 2 of the Office Action, the Examiner does not refer to the FutureScope article for allegedly disclosing any of the features of claim 8 in the explanation of the rejection of claim 8 on pages 3 and 4 of the Office Action.

of ordinary skill in the art would not have been motivated to modify the host device of Figure 1 and 1B to include the administration program of the Internet server of Domenikos.

Accordingly, Applicant respectfully submits that independent claim 8, as well as dependent claims 9-15, should be allowable because the cited references do not teach or suggest all of the features of the claims and one of ordinary skill in the art would not have been motivated to combine and modify the cited references to produce the claimed invention.

**C. Claims 16-24**

The Examiner generally asserts that Domenikos discloses the features of dependent claims 16-24 via “the file hierarchy (col 14, ln 39-46)”, “disk partition (col 4, ln 4-45)”, “a file directory (col 4, ln 24-45)” without providing specific details of how these elements of Domenikos correspond to the claimed connections between the host device and the slave device. However, in addition to the reasons set forth with regard to independent claims 1 and 8, Applicant respectfully submits that it is quite clear that Domenikos does not teach or suggest the subject matter of claims 16-24. Similarly, the newly cited FutureScope article does not make up for the deficiencies of Domenikos or the other cited references.

With regard to claims 16, 19 and 22, Applicant respectfully submits that it quite clear that the cited references do not teach or suggest “the slave device is logically connected to the host device according to a predetermined protocol between the control and error correction layer of the media driver of the slave device and a control and error correction layer of the file system of the host device such that data is transmitted from the control and error correction layer of the

media driver of the slave device to the application program of the host device via the control and error correction layer, the logical-to-physical conversion layer and the file system drive layer of the file system of the host device”, as claimed.<sup>5</sup>

With regard to claims 17, 20 and 23, Applicant respectfully submits that it is quite clear that the cited references do not teach or suggest “the slave device is logically connected to the host device according to a predetermined protocol between the logical-to-physical conversion layer of the media driver of the slave device and a logical-to-physical conversion layer of the file system of the host device such that data is transmitted from the control and error correction layer and the logical-to-physical conversion layer of the media driver of the slave device to the application program via the logical-to-physical conversion layer and file system drive layer of the file system of the host device”, as claimed.<sup>6</sup>

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<sup>5</sup> As shown in Figure 3, a media driver 224a of the slave device 22 may include only a control and error correction layer 36 for controlling the storage device 222 and detecting and correcting errors. A protocol architecture included in a file system 204a of the host device 20 connected with the slave device 22 is composed of a control and error correction layer 30 for detecting and correcting errors, a logical-to-physical (L-P) conversion layer 32 for converting logical location information used by the file system 204 into physical location information, and a file system drive layer 34 for abstracting data stored in the storage device 222 to allow the application program 202 to access the data as a file using the logical location information. The slave device 22 is logically connected to the host device 20 according to a predetermined protocol between the control and error correction layer 36 of the slave device 22 and the control and error correction layer 30 of the host device 20.

<sup>6</sup> As shown in Figure 4, a media driver 224b of the slave device 22 may include a L-P conversion layer 46 for converting logical location information used by the file system 204 into physical location information and a control and error correction layer 48 for controlling the storage device 222 and detecting and correcting errors. A protocol architecture included in a file system 204b of the host device 20 includes a L-P conversion layer 42 and a file system drive layer 44, wherein the slave device 22 is logically connected to the host device 20 according to a predetermined protocol between the L-P conversion layer 46 of the slave device 22 and the L-P conversion layer 42 of the host device 20.



With regard to claims 18, 21 and 24, Applicant respectfully submits that it is quite clear that the cited references do not teach or suggest “the slave device is logically connected to the host device according to a predetermined protocol between the file system drive layer of the media driver of the slave device and the file system drive layer of the file system of the host device such that data transmitted via the control and error correction layer, the logical-to-physical conversion layer and the file system drive layer of the media driver of the slave device is sent to the application program via the file system drive layer of the file system of the host device”, as claimed.<sup>7</sup>

Accordingly, Applicant respectfully submits that dependent claims 16-24 should be allowable over the cited references.

### **III. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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<sup>7</sup> As shown in Figure 5, a media driver 224c of the slave device 22 may include a file system drive layer 56 for abstracting data stored in the storage device 222 to allow the application program 202 to access the data as a file using the logical location information, a L-P conversion layer 57 for converting logical location information used by the file system 204 into physical location information, and a control and error correction layer 58 for controlling the storage device 222 and detecting and correcting errors. A protocol architecture included in a file system 204c of the host device 20 includes only a file system drive layer 54, wherein the slave device 22 is logically connected to the host device 20 according to a predetermined protocol between the file system drive layer 56 of the slave device 22 and the file system drive layer 54 of the host device 20.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Patent Application No. 09/597,702

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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